		Cost	
Wildcat Dam	$ 1,150,000	$ 450,000	$ 1,600,000
Eagle Canyon Dam	1,300,000	600,000	1,900,000
Coleman Dam	600,000	260,000	860,000
Totals	$ 3,050,000	$ 1,310,000	$ 4,360,000

J. Conclusions

Removal of Wildcat, Eagle Canyon, and Coleman Diversion Dams is technically feasible, and would require durations between 4 and 6 months to accomplish in the field, for a total project cost between $4,360,000 and $6,830,000 (including contingencies and non-contract costs), depending upon the final removal requirements for the concrete footings along the canal pipeline and flume alignments for Wildcat and Eagle Canyon Dams, and the retention of any other features at the dams. Preliminary construction schedules for partial dam removal, and reconnaissance-level field cost estimates for both full and partial dam removal, are provided in Appendix C and Appendix D, respectively. Construction schedules for full dam removal may require a second construction season.

Dam removal would provide unobstructed passage in both North Fork and South Fork Battle Creek for anadromous fish, without the need for special fish passage structures at each damsite. Minimal adverse environmental impacts would be expected. The masonry structures would be demolished in place, with the rubble spread across the downstream channel, or removed if necessary to prevent ponding. All associated waste concrete, reinforcing steel, mechanical items, and miscellaneous metalwork would be removed from the sites, including 3,385 lin ft of metal flume and 5,530 lin ft of steel pipeline. The reservoir sediments would be removed by natural stream erosion and by mechanical removal (at Coleman Dam), with associated turbidity expected to be within acceptable limits. Some mechanical removal of reservoir sediments may be required at all three sites to facilitate streamflow diversion and/or for removal of the dam structures to the original streambed elevations. Selected structural features could be retained at each damsite to permit interpretation of the historic sites, and to minimize dam removal costs.

Conceptual photographs of each damsite, reflecting the anticipated appearance following partial dam removal, are provided in Appendix E.

K. Additional Investigations for Future Studies

The following items should be completed for any future dam removal studies for the project:

1. Prepare site topography for Wildcat and Coleman damsites (by DWR).

2. Develop detailed drawings of existing facilities, for use in estimating quantities and for inclusion in the HAER needed to document each damsite. Provide pertinent construction drawings, correspondence, and photographs, if available.

3. Evaluate existing masonry canal walls at the Eagle Canyon and Coleman damsites, if they are to be retained, for stability under proposed backfill loads, using the structural dimensions from item 2. Evaluate potential tieback or buttress systems as required.

4. Identify and perform additional studies related to cultural resources, species of special concern, and all other issues pertaining to compliance with the National Environmental Policy Act (NEPA).

5. Evaluate proposed design and construction schedule for the direct connection between the Inskip Powerhouse tailrace and the Coleman Canal.

6. Obtain streamflow data from new gauges below the Wildcat and Coleman damsites, when available, and compare with data at the existing downstream Battle Creek gauging station.

7. Determine the minimum acceptable flowrate for South Fork Battle Creek at the Coleman damsite during August and September, to facilitate removal activities.

8. Determine final limits of structure removal at all sites (features to be removed and features to be retained), based on economic, public safety, and other considerations.

9. Obtain channel cross-sections and gradations for further sediment analysis.

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